

downward into the terminal combined portion. This canal is the vas deferens, and its muscular, unpaired terminal part is the ductus ejaculatorius.

The middle portion, next below the testicle, on account of its histological structure, I consider a glandular tube, one of the accessory organs.

Carl F. Gissler.

Brooklyn, E. D., N. Y.

BIBLIOGRAPHICAL RECORD.

(Continued from page 232.)

The date of publication, here given in brackets [], marks the time at which the work was received by the Editor, unless an earlier date of publication is known to him. An asterisk * before a title is the Recorder's certificate of accuracy of quotation. Corrections of errors and notices of omissions are solicited. — B. PICKMAN MANN.

Nos. 1148 to 1266 are from **Can. entom.**, 1877, v. 9.

* 1148. **Bruner**, Laurence. Black variety of *P. turnus*. (Can. entom., 1877, v. 9, p. 20.)

Relative abundance of the black and the yellow varieties of *Papilio turnus* ♀ in different parts of Nebraska. [Feb., 1877.]

* 1149. **Grote**, A: Radcliffe. New Noctuae. (Can. entom., 1877, v. 9, p. 21-22.)

Describes *Glaea carnosa*, Fishia, *F. enthea* = 1 n. g., 2 n. spp. from Maine; notes on 3 spp. [Mar., 1877.]

* 1150. **Chambers**, Vactor Tousey. *Tineina* from Texas. (Can. entom., 1877, v. 9, p. 22-26, 71-74.)

Descriptive and synonymical notes upon about 16 spp. [Mar., May, 1877.]

* 1151. **Grote**, A: Radcliffe. Notes on a collection of Canadian moths made by Wm. S. M. D'Urban, and named by F. Walker. (Can. entom., 1877, v. 9, p. 27-29.)

Synonyms of species described by F. Walker, in the Canadian naturalist and geologist, v. 5, p. 91-96 and v. 6, p. 36-41; also of species labelled in the collection. [Mar., 1877.]

* 1152. **Edwards**, W: H: Descriptions of a new species of *Pamphila* from Colorado. (Can. entom., 1877, v. 9, p. 29-30.)

Describes *P. snowi* n. sp. [Mar., 1877.]

* 1153. **Saunders**, W: The Luna moth — *Actias luna*, Linn. (Can. entom., 1877, v. 9, p. 31-33, fig. 1.)

Description of imago and larva; figure of imago; food of larva. [Mar., 1877.]

* 1154. **Edwards, W: H:** Supplementary notes upon *Argynnis myrina*, with mention of the species *bellona*, *atlantis* and *cybele*. (Can. entom., 1877, v. 9, p. 34-36.)

Seasons of larvae and imagos, hibernation of larvae; egg of *A. bellona* described. [Mar., 1877.]

* 1155. [**Saunders, W:**] Book notices. (Can. entom., 1877, v. 9, p. 36-37.)

Notice of LeConte and Horn's *Rhynchophora* of America north of Mexico; of the works cited in this record, nos. 967, 845, 794; of Gentry's *Life histories of the birds of eastern Pennsylvania*, vol. 1. [Mar., 1877.]

* 1156. **Chambers, Vactor Tousey.** Correspondence. (Can. entom., 1877, v. 9, p. 38-40.)

[See Rec., no. 1123.] Preferred methods of preparing *Tincina* for study and preservation. [Mar., 1877.]

* 1157. **Caulfield, Frank B.** Notes on hibernating butterflies. (Can. entom., 1877, v. 9, p. 40.)

[See Rec., no. 651.] Dates at which *Vanessa j-album* and *V. antiopa* first emerge from their winter quarters. [Mar., 1877.]

* 1158. **Gentry, T: G:** Metamorphic changes of *Platysamia cecropia*. (Can. entom., 1877, v. 9, p. 41-50.)

Describes the egg and all stages of the larva; periodicity of changes; relation of larva and of color of cocoon to food plants, relation of food to sex; natural enemies. [Apr., 1877.]

* 1159. **Cassino, S: E.** The naturalists' directory. Containing the names of naturalists, chemists, physicists, and meteorologists, arranged alphabetically, with an index arranged according to departments. Salem, Mass., Naturalist's Agency, 1877. [2] + 46 + 20 + [10] p., interleaved in blank, 23 x 15.

* Notice. (Can. entom., 1877, v. 9, p. 50.) [Apr., 1877.]

States the addresses and specialities of 1431 naturalists, and indexes them by their specialities; states the addresses of about 600 chemists and physicists and of about 100 meteorologists. [Feb., 1877.]

* 1160. **Edwards, W: H:** Description of a new species of Hesperian from Texas. (Can. entom., 1877, v. 9, p. 58-59.)

Describes *Pamphila meskei*, n. sp. [Apr., 1877.]

* 1161. **Bell, James Thompson.** Correspondence. (Can. entom., 1877, v. 9, p. 59-60.)

Recommends more extensive publication of notices of the localities, habitats, food and habits of the rarer species of insects, and of the best methods of capture and preservation; likewise of notices of works useful

to young collectors. [Apr., 1877.] [The author's name wrongly given as Jas. H. Bell.]

* 1162. **Worthington**, C: Ellis. Correspondence. (Can. entom., 1877, v. 9, p. 60.)

Notice of a cocoon of *Samia cecropia* containing two pupae. Correction of the article cited in this record, no. 1130. [Apr., 1877.]

* 1163. **Goodell**, Lafayette Washington. Notes on the early stages of some moths. (Can. entom., 1877, v. 9, p. 61-63.)

Describes larva and pupa of *Mamestra adjuncta*, *Apatela hamamelis* *Eupithecia absynthiata*, *Tetracris lorata*, *Ephyra myrtaria*. [May, 1877.]

* 1164. **Saunders**, W: On *Deilephila chamoenerii* [*sic*] and *lineata*. (Can. entom., 1877, v. 9, p. 63-67, fig. 2-5.)

Describes and figures the imagos of both species and the larvae of *D. lineata*; describes the larva of *D. chamoenerii*; mentions the food-plants. [May, 1877.]

* 1165. **Grote**, A: Radcliffe. Six new Noctuae. (Can. entom., 1877, v. 9, p. 67-71.)

Describes *Eustrotia mariae*, *Thalpochares orba*, *Spragueia plumbifimbriata*, *Fruva* (type: *Spragueia fasciatella*), *F. obsoleta*, *Tripudia*, *T. flavo-fasciata*, *Antaplaga*, *A. dinidiata* = 3 n. g., 6 n. spp.; note on the genus *Glaea*. [May, 1877.]

* 1166. **Harvey**, Leon Ferdinand, *M. D.* Description of a new Limacodes. (Can. entom., 1877, v. 9, p. 75.)

Describes *L. latomia* n. sp., from Texas. [May, 1877.]

* 1167. **Caulfield**, Frank B. Notes on some species of *Meloe* occurring in temperate north-eastern America. (Can. entom., 1877, v. 9, p. 75-80.)

Discrimination and synonymy of *M. angusticollis* Say = *M. rugipennis* Lec., and *M. americanus* Leach = *M. angusticollis* Lec.; collation of records of capture of the two species; seasons. [May, 1877.] [Is the author's name Caulfield or Caulfeild?]

* 1168. [**Saunders**, W:] Important notice. (Can. entom., 1877, v. 9, p. 80.)

Resignation of the Secretary-Treasurer of the Entom. Soc. Ontario, J. H. McMechan. [May, 1877.]

* 1169. [**Saunders**, W:] Book notices. (Can. entom., 1877, v. 9, p. 80.)

Notice of Packard's Half hours with insects (see Rec., no. 309, 994), and of Scudder's Report upon the orthoptera collected by the Wheeler expedition; mention by title of other papers by Scudder. [May, 1877.]

* 1170. [**Saunders, W.:**] The United States Entomological Commission. (Can. entom., 1877, v. 9, p. 81-84.)

Notice of the appointment of the commission; assignment of work to the members; topics for investigation. [June, 1877.]

* 1171. **Grote, A.:** Radcliffe. Notes and descriptions of new moths. (Can. entom., 1877, v. 9, p. 84-90.)

Describes *Dasychira lintneri*, *Lithophane baileji*, *Apatela (Acronycta) falcata*, *Mamestra beanii*, *Ochria buffaloensis*, *Polia pallifera*, *Homoptera woodii*, *Tornos infumataria* = 8 n. spp.; describes *Aspilates pervaria* var. *interminaria* n. var.; remarks upon species of *Euchaetes*, *Euclea*, *Gortyna*, *Endropia* and other genera, and upon the success of "sugaring for Noctuae." [June, 1877.]

* 1172. **Caulfield, Frank B., and Pearson, C. W.** List of Bombycidae occurring on the Island of Montreal, P. Q. (Can. entom., 1877, v. 9, p. 90-92.)

Enumerates 60 species, with notes on abundance and seasons. [June, 1877.]

* 1172a. **Pearson, C. W.** List of Bombycidae occurring [at] Montreal. See **Caulfield, F. B., and Pearson, C. W.**

* 1173. **Austin, E.:** Payson. Remarks on the synonymy of North American coleoptera. (Can. entom., 1877, v. 9, p. 92-94.)

Synonymy of certain species of *Tachinus*, *Languria*, *Odontata*, *Chelymorpha*, *Graptodera*, *Leptura*. [June, 1877.]

* 1174. **Harvey, Leon Ferdinand, M. D.** On species of *Melipotis*. (Can. entom., 1877, v. 9, p. 94-95.)

Describes *M. jucunda* var. *versabilis* n. var., and *M. sinualis* n. sp. [June, 1877.]

* 1175. **Harvey, Leon Ferdinand, M. D.** On an American species of *Lophopteryx*. (Can. entom., 1877, v. 9, p. 95-96.)

Describes *L. americana* n. sp. [June, 1877.]

* 1176. **Grote, A.:** Radcliffe. On *Pseudohazis hera*, (Harris). (Can. entom., 1877, v. 9, p. 96.)

Synonymy of *Ps. hera* and *Ps. eglanterina*. [June, 1877.]

* 1177. [**Saunders, W.:**] Catalogue of the lepidoptera of America north of Mexico. Part 1 — Diurnals; by W. H. Edwards. (Can. entom., 1877, v. 9, p. 97-98.)

Notice and commendation. [June, 1877.]

* 1178. **Andrews, W:** Valentine. New species of Noctuidae. (Can. entom., 1877, v. 9, p. 98-99.)

Describes *Acronycta walkeri*, *Orthosia lutosa* = 2 n. spp. [June, 1877.]

* 1179. **Packard, Alpheus Spring, jr., M. D.** The Hessian fly, joint worm and wheat midge. (Can. entom., 1877, v. 9, p. 100.)

Request for specimens of the insects mentioned, in all stages of growth. [June, 1877.]

* 1180. **Andrews, W:** Valentine. [Long Island Entomological Society.] (Can. entom., 1877, v. 9, p. 100.)

Notice of formation, and list of officers of the society. [June, 1877.]

* 1181. **Moffat, J:** Albert. Correspondence. (Can. entom., 1877, v. 9, p. 100.)

Meloe captured 17 April. *Cicindela purpurea* ♂ in copula with *C. vulgaris* ♀. [June, 1877.]

* 1182. **Grote, A:** Radcliffe. On a new Canadian Crambus allied to conchellus. (Can. entom., 1877, v. 9, p. 101-102.)

Describes *Crambus interruptus* n. sp. [July, 1877.]

* 1183. **Monell, Joseph.** A new genus of Aphidae. (Can. entom., 1877, v. 9, p. 102-103.)

Describes *Colopha*, n. g. (type: *Byrsocrypta ulmicola* Fitch); bibliography of the species. [July, 1877.]

* 1184. **Grote, A:** Radcliffe. New Pyralides. 3. (Can. entom., 1877, v. 9, p. 103-107.)

Describes *Botis atropurpurealis*, *B. harreyana*, *B. flavidissimalis*, *B. catenulalis*, *B. tatalis*, *B. penumbralis*, *B. socialis*, *B. allectalis* = 8 n. spp.; describes or mentions other *Botis* and *Eurycreon communis*. [July, 1877.]

* 1185. **Chambers, Vactor Tousey.** Tineina. (Can. entom., 1877, v. 9, p. 108-110.)

Describes *Heliozella? aesella* n. sp.? "Do the Glyphipterygidae afford a passage from the Gelechiidae to the Elachistidae?" [July, 1877.]

* 1186. **Harvey, Leon Ferdinand, M. D.** Description of a new Texan Anisota. (Can. entom., 1877, v. 9, p. 110-111.)

Describes *A. heiligbroditi* n. sp. [July, 1877.]

* 1187. **Dodge, G:** M. New species of orthoptera. (Can. entom., 1877, v. 9, p. 111-113.)

Describes *Culoptenus angustipennis*, *C. volucris*, *C. plumbum*, *Pezotettix abditum* = 4 n. spp., from Nebraska. [July, 1877.]